

of the amendments and discussion that follows. Claims 1-32 are pending in this application. The drawings have been objected to. The title of the invention has been objected to. Claims 1-32 have been rejected under 35 U.S.C. §112, first paragraph, as being non-enabling. Claims 1-32 have been rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,121,965 to Kennedy et al. in view of U.S. Patent No. 5,950,201 to Van Huben et al. and U.S. Patent No. 5,821,934 to Kodosky et al. After a careful review of the claims, it has been concluded that the rejections are in error and the rejections are, therefore, traversed.

2. The drawings have been objected to as being informal. In response, formal drawings have been included herewith.

3. The title of the invention has been objected to. In response, the title has been corrected as suggested by the Examiner.

4. Claims 1-32 have been rejected as being non-enabling. In specific, the Examiner asserts that

"The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. Specifically, while the reference makes reference to creating, converting, and assembling, from 'a graphical representation of the system', it does not teach the process or provide an algorithm or methodology that would allow one of ordinary skill to make and/or use the invention. The specification makes reference to performing tests and measurements (also, 'test results' and 'measurement capabilities') but does not specifically teach how the tests or

measurements are performed. Further, while terms such as 'task object', 'resource allocating object' and 'matrix object' are mentioned in the specification, no definition or explanation is given as to precisely what information is contained in these objects or specifically how they are used by the system. The operation of the conversion, communication, and element processors/ controllers are also not describe in a manner that would allow one of ordinary skill to make and/or use the invention. In general, the specification appears to be a 'wish list' of features and does not specifically teach how these features are actually realized in the invention".

It is noted first in this regard that the claims are directed to a method of (and apparatus for) "assembling and operating a physical system from a remote location". The method of claim 1 (for instance) includes the step of "creating a graphical representation of the physical system at the remote location showing the elements and connections of the system to be assembled".

In this regard, the specification (page 8, lines 5-10) discusses the use of a Java applet or application that "allows the user to graphically create the representation of the task to be performed". More specifically, "While many different applications may be used to create the representation (i.e., of the DUT), the circuit modeling language SPICE has been found to work well" (specification, page 8, lines 7-10). Further, the specification describes (e.g., page 8, lines 11-25) and FIGs. 3-6 shows the process of creating a graphical

representation of the physical system at the remote location and the elements and connections of the system to be assembled.

The second element of claim 1 is directed to "converting the graphical representation into an element list delineating the elements, interconnections, and configurable properties of the elements". In this regard, the specification describes this step in numerous locations (e.g., page 5, lines 22-25; page 11, lines 5-27, etc.). Page 11, lines 15-24 of the specification specifically shows an example of an elements list of the DUT of FIG. 8.

Further, "Within the terminal 12, the graphical representation of the system is converted by a conversion processor into the element list 12" (specification, page 3, lines 22-24) and "a text-based description (i.e., an element list) of the task is sent over the network to the server 22" (specification, page 9, lines 2-5). With regard to conversion, "The syntax used for the text-based description of the task may be that of the circuit simulation language SPICE" (specification, page 9, lines 15-17).

The third element of claim 1 is directed to "transferring the element list from the remote location to an element controller". The specification describes in

numerous locations (e.g., page 3, lines 22-27; page 9, lines 2-5; etc.) and FIG. 2 shows the transfer of the element list 20 from the remote location to the measurement request broker 22.

The fourth and last element of claim 1 is directed to "assembling and operating the system by the element controller in accordance with the element list". In this regard, the specification also describes in numerous locations (e.g., page 3, line 28 to page 4, line 2; page 11, line 11 to page 12, line 16; etc.) the assembly and operation of the system in accordance with the element list.

As such, the limitations of independent claim 1 (and independent claims 13 and 24) correspond to the scope of the description and would be well understood to a person of skill in the art. Since the claims are consistent with the description and the description is adequate for understanding by those of skill in the art, it is believed that the rejection is improper and should be withdrawn.

It is noted next that the Examiner's speculation with regard to what a person of skill in the art would understand from the specification does not provide a sufficient basis for rejection under 35 U.S.C. §112. More specifically, "a specification disclosure which contains a

teaching of the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented *must* be taken as in compliance with the enabling requirements of the first paragraph of §112 *unless* there is reason to doubt the objective truth of the statements contained therein which must be relied upon for enabling support". In re Marzocchi & Horton, 169 USPQ 367 (CCPA 1971).

The specification clearly teaches the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented. Further, the Examiner has failed to provide any teaching which provides a basis for doubting the objective truth of any statement within the specification.

Since the Examiner has failed to establish any basis for doubting the objective truth of the specification, it is believed that the rejection is in error. Since the rejection is in error, the rejection should be withdrawn.

5. Claims 1-32 have been rejected as being obvious over Kennedy et al. in view of Van Huben et al. and Kodosky et al. In particular, the Examiner asserts that

"Kennedy does not explicitly teach facilitating the remote manufacturing of a physical structure. Van Huben teaches a system for concurrent engineering and facilitating the remote manufacturing (world wide via terminals) of a physical system by coordinating the transfer of design information to remote locations (Graphical representation, elements lists (net lists), etc.) (CL80-L59), and further teaches tracking (recording) the system response and remotely spawning (launching) tasks (CL20-L28-31) that can be user composed/modified. (Abstract, Summary of Invention, CL20-L54-CL23-L15, Figs. 1, 10, 16). These techniques, in particular creating and spawning tasks, in addition to being taught by Van Huben, are also well known in the art."

It is noted first, that the independent claims are limited to method steps of (and apparatus for) transferring the element list from the remote location to an element controller; and assembling and operating the system by the element controller in accordance with the element list". It is believed, in this regard, that the combination of Kennedy et al., Van Huben et al. and Kodosky et al. fails to provide any teaching or suggestion of the use of an element controller that is capable of assembling and operating a physical system in accordance with an element list.

It is noted next that the specification explicitly states that the element list is "transferred by a communication processor through the Internet 14 to an element processor (i.e., a measurement resource broker (MRB) 16)" (specification, page 3, lines 22-27). This element processor or controller 16 "determines whether it has the physical elements and particular forcing function(s) needed to construct and operate the physical model. If it does, the MRB 16 assembles the physical

system. Test instruments are connected to the physical model, as is the forcing function. Measurements are collected on system performance and the measurements returned to the terminal 12." (specification, page 3, line 29 to page 4, line 2).

In contrast, and as admitted by the Examiner, "Kennedy does not explicitly teach facilitating the remote manufacturing of a physical structure". The Examiner also admits that Van Huben et al. merely facilitates remote manufacturing.

More importantly, the end result of the Van Huben et al. process is a software model. As explicitly stated by Van Huben et al. "Our model thus consists of one anchor (with a name 235) and one or more associated components, each of which is a data object in said data management system" (Van Huben et al., col. 12, lines 1-3). Moreover, even the anchor lacks a physical presence in that "Data may be identified by a filename (anchor name 235) and a filetype (236)" (Van Huben et al., col. 13, line 25). Since the Van Huben model consists of an anchor ("filename (anchor name 235)") and one or more data objects, Van Huben et al. is clearly a software process.

To state the concept even more succinctly, the "element controller" of the claimed invention physically connects tangible elements 26, 28 to construct a physical embodiment of a model under test; whereas, the Van Huben et al. system simply constructs intangible software models. As explicitly stated by Van Huben et al., "More than merely a repository for data, the ALM is a userid capable of accepting, executing and dispatching tasks without any human intervention . . . This enables the designers to make requests of the ALM to promote data or run library

processes without the need for a Data Manager to process it" (Van Huben et al., col. 12, line 66 to col. 13, line 4). Since Van Huben et al. constructs software models, there is no "remote manufacturing of a physical structure" as asserted by the Examiner (Office Action of 10/3/02, page 6).

Moreover, since Van Huben et al. teaches of the building of software models, the step of netlisting a release (Van Huben et al., col. 80, line 59) would refer to a list of software components, not hardware componets. In addition, the Examiner's assertion that Van Huben et al. "teaches tracking (recording) the system response and remotely spawning (launching) tasks (CL20-L28-31) that can be user composed/modified. (Abstract, Summary of Invention, CL20-L54-CL23-L15, Figs. 1, 10, 16)" is also irrelevant since even if Van Huben et al. did do as the Examiner asserts, such teaching would relate to the creation of software models and not hardware models such as the claimed "physical system" of claims 1, 13 and 24.

Kodosky et al. is also of no help in demonstrating the prior existence of a element controller. More to the point, Kodosky et al. is directed to data type checking, not model building.

Since the combination of Kennedy et al, Van Huben et al. and Kodosky et al. fails to teach or suggest the use of an element controller for "assembling and operating the system by the element controller in accordance with the element list", the combination fails to teach each and every claim limitation as required by MPEP §2143.03. Since the combination fails to teach each and every claim limitation, the rejection is believed to be improper and should be withdrawn.

6. Allowance of claims 1-32, as now presented, is believed to be in order and such action is earnestly solicited. Should the Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, he is respectfully requested to telephone applicant's undersigned attorney.

Respectfully submitted,
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